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Those of us who work on rural financial markets face the dual challenge of dealing with nagging problems in low-income countries and also helping to reconstruct financial markets in economies that were formerly centrally planned. The lessons learned the past four decades in low-income countries, in my opinion, provide valuable guidelines for dealing with both challenges. Although disagreement lingers, there is growing consensus about what did and did not work.[1] This includes diminished expectations about what can be accomplished through financial markets and a recognition that the provision of formal financial services in rural areas is expensive and accident prone. We also more clearly understand the importance of overall economic growth, law and order, and control of inflation in creating an environment conducive for financial market development (McKinnon 1991). Using market rates of interest and mobilizing deposits in rural areas are now also generally accepted practices.

There has been less discussion, however, of three other important issues that strongly influence the development of rural financial markets: the incentives problems involved in principal-agent relationships, the prudential regulation problem, and transaction costs. It is becoming increasingly clear that flawed principal-agent rules and lack of prudential regulation contributed to the disintegration of many rural finance programs. It is also apparent that excessive transaction costs are a major explanation for the lack of outreach in many rural financial systems. Because they are often strongly influenced by donor activities, I focus the discussion that follows on transaction costs. I first define these costs, then discuss their role in rationing financial services, briefly discuss how these costs might be reduced, provide a few comments on why they are an important issue in financial markets that are being reformed, and conclude by suggesting ways for donors to better deal with these costs.

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[1]Continued disagreement is illustrated by two World Bank publications in 1993. One publication issued by the Operations Evaluation Department argued that the Bank should continue funding traditional agricultural credit projects. Another publication prepared by the Operations Policy Department argued for a cessation of these programs.

TRANSACTION COSTS DEFINED

Transaction costs are to the functioning of financial markets what friction is to a machine. A carefully crafted and well lubricated automobile engine, for example, will create less friction and thus operate more efficiently than engines without these qualities--it will go further on a tank of gasoline. Engines with excessive friction clatter along, generate heat, and eventually grind to a stop. Excessive transaction costs have a similar effect on the operations of a financial market--they shorten its life and lessen its outreach.

Transaction costs are the implicit and explicit expenses incurred by participants in financial markets to effect financial transactions--excluding interest payments, the costs of funds, and loan losses. These costs fall into two broad categories: the opportunity cost of time spent by borrowers and depositors as they negotiate financial contracts and the explicit expenses incurred by all participants to form, to fulfill, and to enforce these obligations. Total transaction costs (t) can be subdivided into the costs incurred by the five major sets of participants in financial markets: borrowers (b), depositors (d), lenders (l), deposit mobilizers (dm), and regulators (r):

$$t = b + d + l + dm + r. \quad (1)$$

Borrowers' costs include the value of time they spend soliciting, negotiating, withdrawing, and repaying their loans. It also includes costs for trips to deal with the lender, costs of providing suitable collateral, out-of-pocket costs for preparing loan documents, gratuities for co-signers, possible bribes or broker's fees to influence loan decisions, the opportunity costs involved in compensatory balances, and other expenses incurred in sustaining and enhancing their creditworthiness. A borrower's cost (bc) of a loan--the perceived price of the loan--is the sum of these transaction costs (b) plus interest payments made for the loan (il):

$$bc = b + il. \quad (2)$$

Depositors' costs mostly involve the opportunity cost of time spent in searching for savings alternatives, in making deposits and withdrawals, along with any associated transportation expenses (Guerrero 1988). The net return that savers receive on their deposits (nrd) is equal to the interest received on deposits (id) less the transaction costs they incur (d):

$$nrd = id - d. \quad (3)$$

Lenders' transaction costs mostly stem from gathering and processing information required to screen potential borrowers, process loans and associated collateral, costs of monitoring loans, and expenses generated by loan collection or collateral seizure. A significant part of these costs are engendered by the lender managing the risks involved in credit. The net returns from lending equals interest paid on the loan (il) less the lender's loan transaction costs (l), less the cost of funds lent (cf), less loan losses (ll), less the lender's costs of submitting to prudential regulation (lr):

$$nrl = il - l - cf - ll - lr. \quad (4)$$

Deposit mobilization also imposes transaction costs on the mobilizer; deposit documents must be issued, transactions handled, records kept, and reserve requirements met. For a financial intermediary that relies only on deposits and equity capital for lending the cost of funds (cf) equals the interest paid on deposits (id), the dividend paid on equity (e), plus the transaction costs of sustaining this activity (dm), and the costs of submitting to any prudential regulation or insurance (dmr):

$$cf = id + e + dm + dmr. \quad (5)$$

Especially in financial institutions that mobilize deposits, there is often a public interest in guarding these funds from theft and malfeasance. This leads to the formation of deposit guarantees and prudential regulation, both of which typically impose additional transaction costs on financial institutions.[2] Intermediaries may be forced to pay insurance premiums and to also incur additional costs of being examined and supervised. The expenses involved in setting up and running these insurance or regulatory agencies can be significant. Furthermore, to stabilize liquidity or to insert additional funds into a rural financial system, a second-story financial facility may be created to dispense or to receive funds. Examples of this are a specialized office in a central bank, a national federation for cooperatives, or a second-story bank for non-governmental organizations. The total regulatory costs (rc) are equal to the

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[2]Agricultural lenders may also be involved in loan insurance schemes. In some cases it is difficult to distinguish between loan guarantee programs and crop or enterprise insurance. A crop insurance program may be essentially loan insurance when lenders have first claim on damage payments. Typically, governments promote loan insurance and sometimes crop insurance to alter lender behavior in favor of the activity that is insured. This is beyond the prudential regulation interests that governments have in financial markets.

regulatory costs imposed on the lender (lr), the regulatory costs imposed on the deposit mobilizer (dmr), plus the costs of operating the regulatory organizations (ro):

$$rc = lr + dmr + ro. \quad (6)$$

Where the purchasing power of money declines due to inflation, the nominal values represented in equations 2 through 5 must be converted to real values. This involves subtracting a price change element (p) in each of these equations. Other things equal, inflation benefits debtors (borrowers and deposit mobilizers) to the determent of the creditors in the system (depositors and lenders).

An additional distinction between transaction costs is worth making. These costs are normally high in non-urban areas because of the nature of rural financial intermediation; particularly among individuals with scant collateral, those with modest and irregular incomes, and those who do small transactions. Even under the best of circumstances transaction costs in rural finance are higher than in urban centers because of the distances involved. In addition to normal transaction costs, additional costs may be imposed on participants by other donor or government intrusions that I label loan targeting.

TRANSACTION COSTS AND RATIONING

Transaction costs in rural financial markets are not allocated in fixed proportions among participants (Cuevas and Graham 1986). New and non-preferred clients generally incur higher transaction costs for a given financial product than do previous or preferred clients. These costs per unit of transaction for both the financial intermediary and the client generally decline as their working relationship matures, as the size of the financial transaction increases, and as the financial system becomes more efficient (Saito and Villanueva 1981).

Rationing

Recent research is also showing that the allocation of these costs among the four categories of participants, among individuals in each category, and the sum total of transaction costs are strongly influenced by financial market policies and by other government and donor actions (Cuevas and Graham 1984; Ladman 1984). In many cases reallocated transaction costs partially substitute for price in the rationing of financial services. In analyzing this it is useful to separate these costs into those that are "naturally" associated with financial intermediation and those that are imposed on participants by regulation or loan targeting. Several examples may clarify how this reallocation functions.

A number of governments have imposed interest rate ceilings on agricultural loans. These rates were often below commercial rates and sometimes below the expected rates of inflation. This generates an excess demand for loans and forces lenders to devise substitutes for interest rates to perform the rationing function. One common alternative is for the lender to shift part of their normal loan transaction cost to non-preferred clients, or to create additional hurdles that non-preferred clients must overcome to access subsidized funds. Forcing new borrowers and borrowers of small amounts to stand in line, to make numerous trips to the bank to transact a loan, forcing them to pay for a bank technician to visit their farms, and requiring them to pay for loan application forms are all signs of this reallocation.

I vividly remember visiting a small branch of a bank in the Belize a number of years ago that was extending cheap credit and seeing long lines of poor farmers waiting in the hot sun in the front of the bank to negotiate their loans for the next cropping season. On average these farmers visited the bank 6 or 7 times to negotiate, withdraw, and repay loans.[3] This often involved sacrificing a half day or more of work to effect each transaction. While interviewing the harried branch manager I overheard him quickly negotiate loans on the phone with preferred clients who were only required to visit the bank twice: to sign and receive their loan and then later to repay.

Also during the interview, several preferred clients entered the branch by the back door, were given cold drinks, and then quickly negotiated new loans with the manager. These individuals had been bank clients for a number of years and also borrowed sizable amounts. In relative and also in absolute terms the bank was imposing higher transaction costs on the farmers waiting in front of the bank than it imposed on preferred, "back door" clients. This resulted in the borrowing costs per unit of money borrowed for non-preferred borrowers being substantially higher than that incurred by preferred clients. Under these circumstances it was not surprising to find a relatively large portion of the operators of small farms in Belize using informal sources of credit that charged higher interest rates on loans than did the bank, but employing procedures that imposed few transaction costs on borrowers.

Why did the bank do this? Rather than being a nefarious plot to exclude poor people from formal loans, it was the normal reaction of any firm that is trying to maximize its returns by limiting its costs. At least some of the transaction costs for the non-preferred borrowers would have been absorbed by the bank

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[3]See Ahmed 1980, Ahmed 1989, Ladman 1984, and also Nehman for similar cases in Sudan, in Bangladesh, in Bolivia, and in Brazil.

through hiring more loan officers, by expanding the size of the branch, and by simplifying its procedures for non-preferred clients if interest rates had been allowed to play a larger role in loan-rationing.

Loan targeting

Cuevas and Graham (1984) provide a Honduran example of how loan targeting affects overall transaction costs. Targeting occurs when donors or governments provide funds to lenders that must be lent for specified purposes: for example, for fertilizer purchase, for rice production, for purchase of machinery, for operators of small farms, for women, or for operators of microenterprises. To assure compliance with lending targets the providers of funds usually require detailed reports on borrowers and loans and then later require credit-impact studies. In some cases this might involve a bank maintaining separate records on dozens of targeted lending programs.[4] In Honduras the banks that managed these targeted programs incurred sharply higher loan transaction costs per unit of money lent than did banks that avoided these programs. Borrowers also incurred additional transaction costs in complying with provisions attached to the targeted funds. An extreme example of this occurred in Tunisia a number of years ago when farmers were forced to complete seven sets of loan application forms that were then sent to various donor and government offices in order to qualify for "cheap" targeted loans.

Several years ago I stood in a large room in the Central Bank of Bolivia that was filed with paperwork generated by several dozen targeted lending programs. I later saw file cabinets full of duplicate reports on these programs in several donor and government offices in La Paz. Very little of this avalanche of paper was analyzed and none of it contributed materially to any significant decision--few of the reports were ever read by any decision maker. The transaction costs of assembling, processing, and reporting the data were a dead-weight loss on the financial system. Even worse, this useless targeting information crowded out data that would have been useful to managers of financial institutions, and likewise to donors, such as status of loan recovery, number of people served, documentation of lender transaction costs, and viability of financial institutions.

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[4]In the early 1980s the Central Bank of Indonesia maintained nearly 200 separate targeted lending programs. Most agricultural development banks in low-income countries were forced during the 1970s and 1980s to manage at least several dozen of these targeted programs.

I have seen targeted fertilizer/credit programs in Ghana, The Philippines, and Bangladesh that also imposed additional transaction costs on borrowers. In each case, formula loans were given in-kind to borrowers. This involved farmers receiving a fixed number of sacks of fertilizer for each hectare of targeted crop. Because of expected low marginal returns from fertilizer use, however, many of the borrowers decided to use fewer sacks than they borrowed and to sell at a discount in the informal market the remainder, thus adding to their transaction costs of obtaining the type of loan they desired.

Loan quotas, loan size ceilings, and loan guarantee funds are other ways that governments attempt to force lenders to allocate loans in politically determined ways. These programs likewise increase transaction costs. A number of years ago the Colombian government required commercial banks to allocate a minimum of 15 percent of the value of their loans to agricultural credit. Most banks evaded the intent of this regulation by sifting through their existing portfolios and relabeling loans. A loan for the purchase of a truck was relabeled to be an agricultural transportation loan, a loan to a manufacturer who also had a farm was relabeled to be a farm loan and so on.

In this same vain about 15 years ago the government imposed a loan size ceiling on the agricultural development bank in the Dominican Republic with the aim of forcing it to make more loans to poor people. This resulted in the bank making multiple loans to preferred individuals that were each below the loan size ceiling, thereby substantially increasing loan transaction costs for both borrower and lender. About the same time the Philippines government established a loan/crop insurance program to encourage banks to lend more to farmers. This resulted in the formation of a large agency to handle the loan/crop insurance, an increase in the amount of paperwork associated with making a loan, and substantial additional transaction costs for everyone involved in loss claims.

Deposits

Although less dynamic than their loan cousins, transaction costs also play a role in deposits. Substantial reserve requirements may induce banks to limit the size of deposit accounts they will accept to relatively large amounts, such as was done in Kenya during the late 1970s and early 1980s. Changes in banking laws in Mexico during the late 1980s and early 1990s also caused banks to eliminate a large number of savings accounts by raising minimum deposit requirements. These reactions in Kenya and in Mexico reduced the transaction costs of banks handling deposits but also increased the transaction costs of depositors who were forced to use various techniques to marshall the requisite deposit amounts or to seek alternative forms of saving.

The reverse of this happened in Bangladesh and in India during the 1970s when the governments induced banks to open rural branches by tying the provision of an urban branch license to a bank opening several rural branches. This increased the transaction costs of the bank but also reduced the transaction costs of clients in rural areas, particularly depositors. Several countries including The Philippines and Pakistan have experimented with using mobile banks in rural areas which had the same effect on the distribution of transaction costs.

Relative importance

It is noteworthy that the relative importance of transaction costs in influencing behavior among participants varies substantially. Because the normal costs for a lender to negotiate a loan is relatively fixed, they prefer to deal mostly with large loans that involve a small ratio of lender-transaction-costs to total-value-of-loan. These considerations tilt intermediaries in favor of handling relatively large transactions, both loans and deposits. For both borrowers and depositors the importance of transaction costs varies inversely with the size of the loan or deposit. The transaction cost component of borrower's costs and of the net benefits for depositors usually decrease as the size of the transaction increases. Borrowers and depositors of small amounts will, therefore, be quite sensitive to changes in transaction costs, while borrowers and depositors of larger amounts will be more strongly influenced by changes in interest rates.

The behavior of the lender and deposit mobilizer is strongly influenced by both interest rates and transaction costs (Untalan and Cuevas 1989). Under the best of circumstances a financial intermediary has weak incentives to provide financial services to new rural clients who are poor because of the naturally high transaction costs the intermediary incurs in dealing with these clients. Enforcing low interest rates on credit transactions along with extensive loan targeting that increases the lender's costs exacerbates this problem. The low interest rates generate an excess demand that typically causes the lender to off-load additional transaction costs on non-preferred borrowers. Under these circumstances borrowers who are relatively well-to-do receive the bulk of the cheap loans while the effective borrowing costs for poor people may be increased because of the imposition

of sharply higher transaction costs on them.[5] "Cheap credit" ends up not being cheap for poor people under these circumstances because of the reallocation of transaction costs.

REDUCING TOTAL TRANSACTION COSTS

Other things being equal, total transaction costs per unit of funds handled decrease as the size of the transaction increases, as the distance from urban areas decreases, and as the amount of regulation or targeting decreases. Transaction costs are a major reason why it is so difficult to provide small loans that are targeted to clients in rural areas. It is also a major explanation for the tendency of formal financial systems to concentrate their activities in urban areas, among firms and individuals that are relatively well-to-do, and to avoid serving non-target groups. This tendency can only be changed if significant reductions are made in total transaction costs, especially those costs incurred by the financial intermediary. This reduction will allow the financial engine to run more smoothly and facilitate the outreach of the system to embrace additional clients.

Transaction costs can be reduced through four means. One important way is through scale economies when the staff and facilities of the intermediary are used more efficiently by handling a larger volume of business. Overall economic growth allowed this to occur in countries such as Taiwan and the Republic of Korea. People who have more economic opportunities and higher incomes tend to rely more on formal finance than they did earlier.

Another way of reducing transaction costs is through scope economies where an intermediary is able to use staff and facilities more efficiently by providing multiple financial services. An agricultural development bank in the Dominican Republic realized scope economies during the 1980s and early 1990s by expanding its services from just providing loans to about 30 thousand borrowers, to also managing about 150 thousand deposit accounts without increasing the size of its staff.

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[5]Poor depositors are also adversely affected by cheap credit. Low interest rates on loans force even lower rates on deposits; poor people have less latitude than well-to-do people to avoid these low rates. The provision of cheap targeted funds from outside reinforces the decisions of intermediaries to discourage depositors of small amounts by raising associated transaction costs. This, in turn, blocks one of the natural avenues that poor people use to enhance their creditworthiness by demonstrating their savings abilities to lenders.

Because financial contracts depend heavily on information, the associated transaction costs are sensitive to technologies that alter the efficiency of collecting and processing this information. Computers play a key role in reducing these costs. It would have been impossible for the agricultural bank in the Dominican Republic to handle 150 thousand additional accounts with the same number of staff, for example, without employing modern data processing (Gonzalez-Vega 1992). Computers also allowed the installation of automatic teller machines in Japan that enabled all members of farmers' associations to withdraw or deposit funds 24-hours-a-day, seven-days-a-weeks, at thousands of locations throughout the country with obvious implications for the transaction costs of clients and the associations.

Dealing with groups is still another technique for reducing transaction cost, both in lending and deposit mobilization.[6] Ideally, transaction costs for both lender and borrower are less if the intermediary makes one relatively large loan to a group of individuals rather a number of smaller loans to individuals (Huppi and Feder 1990)). If a loan is negotiated by only a few representatives of the group the average borrower under a group loan incurs less borrower transaction costs than they would if they negotiated an individual loan. Likewise, programs that mobilize deposits from groups may also lessen transaction costs of both mobilizer and depositor. A pygmy deposit mobilization program in India, for example, used commission agents who collected small deposits daily from a group of savers that were then deposited in a commercial bank (Bhatt 1988). This arrangement clearly reduced the depositor's transaction costs and may also have eliminated some of the costs of the bank dealing directly with a large number of depositors. Several NGO's in the Philippines have also experimented with using informal groups to mobilize deposits for banks.[7]

Financial innovations

In recent years many of the innovations in grain production were developed in specialized research centers in Mexico and in the Philippines; parallel breakthroughs in fertilizer emanated from a specialized research center in the United States. New financial technology has no similar focal point; new financial ideas can sprout virtually anywhere. Financial innovations are also somewhat unique in that they are not always cost reducing

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[6]Several well known examples of group lending are the Grameen Bank's model in Bangladesh (Getubig and others 1993), the Lilongwe Project in Malawi (Schaefer-Kehnert 1982), and the Bank for Agriculture and Agricultural Cooperatives in Thailand (Yaron 1992b).

[7]Personal communication with Virginia Abiad.

(Kane 1984). Formal financial intermediaries are especially creative in designing ways to mitigate the impact of policy restrictions when doing so is in their own best interest. These innovation, however, may increase the total costs of financial intermediation. The example cited earlier of a bank that evaded the intent of loan size limits by issuing multiple loans to the same firm or individuals is an example of this. Unfortunately, in financial systems that are heavily regulated and in which extensive loan targeting occurs, a good deal of the innovative energy in formal finance is spent in mining the loopholes in rules and regulations, rather than in searching for new ways of doing things that reduce overall transaction costs.

Despite its undeserved, unsavory reputation informal finance is a major hatchery for cost-reducing financial technologies. In large part informal finance succeeds in providing sustained financial services to large numbers of poor people in rural areas because of the cost reducing innovations that are spawned by competition among informal agents. Much of the success of the Grameen Bank in Bangladesh and ACCION International in Latin America in reaching large numbers of poor people is explained by their creative adaptation of techniques commonly used in informal finance (Getubig and others 1993, Christen 1992). Groups, a hallmark of the Grameen Bank approach, is a common feature in informal finance in the form of informal self-help financial groups that are found not only in Bangladesh but also in most other low-income countries. Another distinctive feature of the Grameen Bank as well as a highly successful village banking program in Indonesia is requiring loan repayments each week (Patten and Rosengard). Again, this is a common feature in many types of informal lending.

Informal finance is also more attuned to creating and providing the types of financial services that poor people prefer than is formal finance. In most cases centrally planned financial systems are not designed to provide the types of financial services that poor people desire. Recent research in a large agricultural bank in Egypt, for example, showed that most of the bank's employees were members of self-help financial groups in which they placed the majority of their deposits (Baydas and other 1993). In addition, many of the employees also bought consumer durables on time from other employees who were moonlighting as part-time merchants. Clearly, the bank was not producing the types of financial services that its own employees found to be most desirable and this forced them into informal arrangements.

Informal finance is also more nimble in devising techniques that adjust to changing economic conditions than is the formal financial system. In the mid-1980s when Bolivia was suffering hyper inflation most informal self-help financial groups denominated their obligations to the group in dollars instead of

pesos to protect the contractual obligations from capital erosion. In contrast the Bolivian agricultural development bank persisted in charging negative real rates of interest on their loans and saw the purchasing power of its portfolio essentially evaporate by the late 1980s. Most of the credit unions in the country along with a number of previously successful savings and loan associations were also gutted by inflation and inflexible policies. It is paradoxical that self-help financial groups comprised of employees of these semi-formal financial institutions were among the first to adjust practices similarly to protect their informal savings. At the same time, these employees were unable (or unwilling) to protect their institutions from the onslaughts of inflation through the application of similar techniques.

Expanding the formal financial frontier

Von Pischke used the metaphor of a formal financial frontier in his analysis of development finance (1991). People inside the frontier have access to formal financial services while individuals and firms outside this frontier are forced to do without or to rely on self finance or informal finance. He goes on to argue that expanding this frontier is the primary challenge in developmental finance. One of the major factors that limits the expansion of this frontier is the friction caused by transaction costs. Formal financial institutions refuse to provide financial services to poor people in general, and to rural people in particular, because the costs of doing so under existing circumstances are excessive.

A complementary way of thinking about this problem is to apply the metaphor of lubricants and viscosity. One of the major functions of financial instruments is to lubricate transactions thereby reducing the costs of effecting exchanges. Ideally, a financial system should be highly viscous, its financial services should cover a major part of the economy, including rural areas. If a financial system is severely repressed it resembles heavy-weight oil that only covers a small portion of the economy and provides little lubrication.[8] A healthy and vibrant financial system, on the other hand, resembles light-weight oil that spreads and seeps into cracks and crevices in the economy and

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[8]McKinnon (1973) and Shaw (1973) introduced the useful notion of financial repression. I am less comfortable with their application of the notion of market fragmentation to financial markets. They define a market to be fragmented if interest rates across the market vary. Their analysis ignores borrower transaction costs as part of the loan rationing mechanism and also ignores that the financial system may be producing a variety of products, many of which are called loans, but which might be more correctly thought of as distinct products and services.

provides extensive lubrication for transactions. Although not the only explanation, transaction costs are a major determinant of financial viscosity and are a major explanation for the excessive amount of friction that exists in formal financial markets in rural areas. A financial system that loads excessive transaction costs on participants will reach relatively few people compared to a financial system that reduces these costs.

TRANSACTION COSTS IN CENTRALLY PLANNED ECONOMIES

In extreme cases, centrally planned economies operate essentially without financial intermediation. In the former Soviet Union, for example, deposit mobilization and loan allocation were bifurcated and the financial system was often used as a fiscal tool. Deposits were mobilized by one arm of the system and they then flowed into a governmental labyrinth. At the same time, targeted funds for lending were dispensed by the government through bank channels in accord with central plans. This included lending to enterprises to sustain production and forgiving loans to enterprises that encountered economic hardship. The fiscal nature of the system was accentuated by inflation during the late 1980s and early 1990s; most of the purchasing power of deposit was effectively captured by government through an inflation tax while borrowers received hefty subsidies through negative real rates of interest on loans and loan write-offs.

Transaction costs are largely ignored in these pseudo-financial systems. State-controlled enterprises receive large loans that are automatically approved, lenders are little concerned with creditworthiness, and government may build a dense network of savings deposit branches to provide employment opportunities. The switch to a market economy quickly magnifies the importance of transaction costs. Employees of the financial system must quickly learn how to assess creditworthiness of a large number of new production and marketing units that typically request relatively small loans. Many of these firms may have no track record with the lender and be unable to provide suitable loan collateral. Building these new working relationships between clients and financial institutions will involve substantial transaction costs for both lenders and borrowers. Attempts to reform existing financial institutions to perform these new functions can founder on excessive transaction costs in the form of bloated bank employment, inefficient work habits, and antiquated data processing procedures.[9]

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[9]Several years ago I visited a sizeable bank branch in a rural area of Russia. When I asked the manager to see her record-keeping system she pulled a small spiral-bound notebook from her purse. One page listed a handful of deposits made by

Excessive transaction costs will severely limit for a number of years the outreach of any new financial institutions that are expected to provide rural financial services in these reforming countries. This may force these institutions to focus there lending initially on the new firms that operate in product and input markets. Because of transaction costs it will be easier for the struggling financial system to deal with these types of clients, who, in turn, may extend informal loans to at least some of their clients.

TRANSACTION COSTS AND DONORS

In part, transaction costs in a financial system are a function of overall development. Modern communication facilities, efficient transportation networks, expeditious judicial systems, and a thriving economy are vital ingredients in lowering these costs. Beyond this, nevertheless, donors and governments have several options for further limiting these costs (Meyer and Cuevas 1990).

Avoid loan targeting

Government and donor funding can have a major impact on transaction costs in financial markets. Inevitably targeted loans impose substantial additional transaction costs on both lender and borrower. The political forces that generate the targeting in the first place bring with it the requirement for social accountability--showing that the objectives of targeting are met. Supplying the information that describes who received credit, what uses were supposedly made of loans, and attempting to measure the social and economic impact of targeted lending generates ample additional transaction costs for both borrower and lender. In addition, if the targeted lending is also done on concessionary terms, intermediaries are induced to shift or impose transaction costs on non-preferred borrowers and depositors as ways of rationing their services. Forcing them to do otherwise results in regulation avoidance, subsidy dependence, and debilitation of financial institutions.

Instead of targeting lending, donor and government programs should be aimed at enhancing the efficiency of financial intermediation and reducing overall transaction costs, thereby increasing the outreach of the system. In large part, the new World Bank guidelines provided by the Handbook on Financial Sector Operations (1993) promote this change.[10] Financial

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her employees in the bank for safekeeping and another dozen pages listed loans extended, repaid, and written-off.

[10]The World Bank's World Development Report 1989 supported a similar change in approach.

contracts are ill suited instruments to either address poverty directly, or to prod development. Any subsidy attached to a loan contract is inevitably proportional to the size of the loan and thereby distributes subsidies regressively. Although subsidies on loans may induce individuals to borrow, there is no close relationship between the credit subsidy and the incentives borrowers have to produce or invest because of the fungibility of funds.

Regulation

Donors and governments must also walk a fine line regarding supervision and regulation of financial markets. Prudential regulation is a moral imperative when a financial system mobilizes private deposits. A similar prudential justification exists when the financial system is lending funds provided by governments or donors. A society, be it domestic or foreign, should not be asked to fund a credit project that is not prudentially safeguarded. Trying to force the financial system to do something that is not in its best interest through excessive regulation and supervision, however, generally achieves little more than increasing transaction costs. Loan quotas, interest rate restrictions, loan insurance, and reserve requirements are all common policies that influence transaction costs and the distribution of these costs among financial market participants.

Donors should support and promote prudential regulation. Attempting to alter the normal behavior of financial markets through other regulations, however, should be avoided because of its undesirable effects on transaction costs.

Encouraging innovations

Governments and donors should avoid distracting the managers of financial systems from seeking cost-reducing innovations. This includes avoiding conditions that promote rent seeking in financial markets and avoiding the imposition of rules that promote regulation avoidance. Extensive loan targeting and associated subsidies can turn financial intermediation into a feeding frenzy for rent seekers.[11] Many targeted borrowers may decide unilaterally to expand the size of subsidy they receive by

[11]Extremes in real interest rates, either high or low, attract rent seekers: high rates attract the moral hazard people who are seeking the delinquency subsidy (Stiglitz and Weiss 1981), while low rates are surrounded by people seeking the interest rate subsidy (Gonzalez-Vega 1977).

failing to repay their loans.[12] Seeing this, loan officers feel justified in sharing part of the largess by soliciting bribes for favorable lending decisions. The creative energy spent in colonizing and exploiting these subsidies comes at the expense of creative energy that might have been channelled toward designing innovations that make the financial system more efficient and thereby extend its outreach.

A similar diversion of creative energy occurs when financial markets are overly regulated by attempts to distort their activities in ways that are politically desirable: for example, loans for operators of small businesses, for women, for rice farmers, or for a minority group. These types of regulations typically force creative managers to mine loopholes in the regulations in ways that are beneficial to managers of the institution, but that also result in more friction in the form of transaction costs being inserted into financial intermediation.

In addition to avoiding the misdirection of creative energy, donors and governments should promote incentives that stimulate employees in financial institutions to seek cost-reducing innovations that benefit both clients and intermediaries. Fostering a competitive environment should be a vital part of this, including competition among formal financial intermediaries and competition with informal finance. In many low-income countries the formal financial system does not effectively compete with informal finance. It may only be able to enhance this competition by adapting some of the innovations used by informal finance to minimize transaction costs.

Yaron (1992a) has suggested that future World Bank projects with major credit components should include a measure of subsidy dependency. He implies that the degree of dependency is a proxy for the durability of the activity. A parallel measure of the extent to which a donor's credit project increases or decreases transaction costs, and a measure that also documents who is likely to bear these costs might likewise be a useful supplementary indicator of the durability of a financial program.

CONCLUSIONS

There is no blueprint for building durable rural financial systems; they are difficult to form, often perform below expectations, and can be easily debilitated. Financial friction in the form of transaction costs are a major explanation for

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[12]If the loan is justified on the basis of a person being poor and needing assistance it is easy for lenders and for policy maker to rationalize expanding the subsidy through tolerating loan delinquency.

this. The extent to which these costs are moderated will importantly influence the performance of rural financial markets in both low-income countries and in countries that are experiencing massive economic reforms. Governments and donors that wish to provide sustained formal financial services to new clients, to poor people, and to rural people in general will be unable to do so unless transaction costs are reduced, thereby enhancing the outreach of financial systems. Less loan targeting, more reliance on interest rates to ration financial services, and more emphasis on stimulating cost-reducing innovations must be major parts of this.

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